

(54) DETECTING METHOD FOR SHORT-CIRCUITING SPOT AT CONDUCTOR-COVERED INSULATING PIPE

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PURPOSE: To detect a spot where an outer covering material and a core tube short-circuit, by a method wherein a conductive core tube, an outer periphery of which a conductive sheathing material covers through the medium of an electrically insulating heat insulator 3, is earthed, and a periodical voltage is applied all the way through to the outer sheathing material and the core tube to detect a leak magnetic field or a change in the leak magnetic field.

CONSTITUTION: A conductor-sheathed insulating pipe 1 is constituted such that a conductive outer sheathing material 4 is formed on an outer periphery of a conductive core tube 2 through the medium of an electrically insulating heat insulator 3. When detecting a spot 5 where the core tube 2 and the outer sheathing material 4 short-circuit, the core tube 2 is earthed, and an output of an oscillator 7, employing, for example, a fork oscillator, is applied all the way through to the core tube 2 and the outer sheathing material 4 through a diode (D) 14, in parallel with which a switch (S) 13 is placed. If, with a S 13 closed, a voltage is applied, and an electrostatic induction detector 8 is caused to approach the insulating pipe 1, a leak electric field is detected irrespective of the presence of a short-circuiting spot, and a speaker 10 sounds. If, which a S 13 closed, a rectified voltage is applied through a D14, and in the case of no short-circuit spot, no current flows after charging by the use of an electrostatic capacity, and it is not detected by a detector. But if there is a short-circuiting spot, it can be detected.

